

CLAIMS:

Sub A1 >

1. A method of data transfer in a hierarchical network comprising the steps of:

 receiving first data including an item from an upper system;

 updating attribute information corresponding to said item held in a current system and adding second data held in said current system to said first data; and

 sending said first data and said second data to a lower system.

2. The method of data transfer as claimed in claim 1, further comprising the steps of:

 if said item included in said received first data exists in said current system, updating said existing item;

 changing attribute information for said item held in said current system to a value indicative of common data;

 if said item does not exist in said current system, adding said item to said current system; and

 changing said attribute information for said item held in said current system to a value indicative of data which is prepared by said upper system.

3. The method of data transfer as claimed in claim 1, ~~still~~ further comprising the steps of:

 receiving at least one of edit requirements for addition and deletion of said item; and

 changing attribute information for said item held in

100-200-300-400-500
said current system according to the change of said item and item content of said current system corresponding to said item.

4. A method of data transfer in a hierarchical network comprising the steps of:

receiving an item and data stored in first data coming from a lower system;

if said item exists in a database of said current system and attribute information corresponding to said item indicates a value managed by an upper system, reading data included in said first data and ^{inserting} ~~storing~~ the read data into second data; and

sending said second data to said upper system.

5. The method of data transfer as claimed in claim 4, wherein, if said attribute information corresponding to said item indicates a value not managed by said upper system, said data is stored in said current system.

6. The method of data transfer as claimed in claim 1, wherein said first data includes an operation flag indicative of either one of item addition or item deletion, and addition of said item to said current system is determined on the basis of said operation flag and information indicative of existence or absence of said item in said current system.

7. The method of data transfer as claimed in claim 1, wherein said second data holds manager system information

whether indicative of ~~that~~ said item is the data associated with said current system and whether said item is processed or not is determined on the basis of said manager system information.

8. A method of data transfer in a hierarchical network comprising the steps of:

receiving from a lower system an item and data included in first data and manager system information indicative of whether said item is ~~the~~ data associated with a current system;

if said manager system information is ~~the~~ data associated with said current system, updating ~~the~~ content of an item held in said current system by use of said data;

if said manager system information has information indicative of another system, deleting the information indicative of said current system;

forming second data by said item, said data, and the manager system information with the information indicative of said current system deleted; and

sending said second data to an upper system.

9. A method of data transfer in a hierarchical network comprising the steps of:

receiving first data from a lower system;

forming second data by an item corresponding to default information held in a current system and data included in said first data; and

sending said second data to an upper system.

10. A method of data transfer in a hierarchical network comprising the steps of:

receiving first data from an upper system;

storing into a current system an item included in said first data, said item corresponding to default information held in said current system;

storing data with said item corresponding to said default information of said current system deleted from said first data into second data; and

sending said second data to a lower system.

11. The method of data transfer as claimed in claim 10, wherein data to be sent to said upper system forms said second data when there is no more data to be sent to said lower system after deleting said item corresponding to said default information of said current system from said first data and said second data is sent to said upper system.

12. A data transfer apparatus for use in a hierarchical network comprising:

a receiving block for receiving first data including an item from an upper system;

a merge processing block for updating attribute information corresponding to said item and held in a current system and adding second data held in said current system to said first data; and

a sending block for sending said first data and said

second data to a lower system.

13. The data transfer apparatus as claimed in claim 12, wherein said merge processing block updates said existing item, if said item included in said received first data exists in said current system; changes attribute information for said item held in said current system to a value indicative of common data; adds said item to said current system, if said item does not exist in said current system; and changes said attribute information for said item held in said current system to a value indicative of data which is prepared by said upper system.

14. The data transfer apparatus as claimed in claim 12, further comprising:

an edit processing block for receiving at least one of edit requirements for addition and deletion of said item and changing attribute information for said item held in current system according to the change of said item and item content of said current system corresponding to said item.

15. A data transfer apparatus for use in a hierarchical network comprising:

a receiving block for receiving an item and data stored in first data coming from a lower system;

an update processing block for, if said item exists in a database of a current system and attribute information corresponding to said item indicates a value managed by an

upper system, reading said data included in said first data and storing the read data into second data; and

a sending block for sending said second data to said upper system.

16. The data transfer apparatus as claimed in claim 15, wherein, if said attribute information corresponding to said item is a value indicative of common manager item, said updating processing block stores said data into said current system.

17. The data transfer apparatus as claimed in claim 12, wherein said first data includes an operation flag indicative of either one of item addition or item deletion, and said merge processing block determines whether or not to add said item to said current system on the basis of said operation flag.

18. The data transfer apparatus as claimed in claim 12, wherein said second data holds manager system information indicating that said item is data associated with said current system and said merge processing block determines whether or not to process said item on the basis of said manager system information.

19. A recording medium readable by a computer
storing a program for executing the data transfer method
defined
cited in claim 1.

20. A recording medium readable by a computer
storing a program for executing the data transfer method

Defined

cited in claim 2.

ADD A2 >